

REMARKS

Claims 5-10 are pending for further examination. Claim 5 is currently amended. Claims 9-10 are new.

Originally filed claims 5-8 were rejected in the Office action as anticipated by Akaishi (U.S. Patent No. 6,255,154). As discussed below, applicants respectfully request reconsideration and allowance of the pending claims.

Independent claim 5 recites a method for manufacturing a semiconductor device that includes the step of field-oxidizing a surface region of a semiconductor layer by way of the local oxidation of silicon (LOCOS) method so as to form an insulating film. A first gate insulating film is then formed by patterning the insulating film while employing a resist film as a mask. In an example disclosed at pg. 11, lines 15 - 19 of the present application, a semiconductor substrate is oxidized using the LOCOS method to form an insulating film having a thickness of approximately 1100 nm. (*see* FIG. 3). The insulating film 5 is then patterned, using resist film 6 as a mask, to form both the first gate insulating film 7A and the device separation film 7B. As a result, the first gate insulating film 7A is not formed at a position lower than a surface position of the semiconductor substrate (*see* FIG. 4). In certain implementations, this arrangement may prevent local current crowding and increased ON-resistance, which normally occur at the convex/concave boundaries between the gate insulating film and semiconductor substrate.

In contrast, the Akaishi patent does not disclose or suggest the claimed step of “patterning” an insulating film, which was formed by way of the LOCOS method, in order to form a first gate insulating film.

The Akaishi patent discloses a method for fabricating an LDMOS transistor that includes selectively oxidizing a substrate surface by the LOCOS method to form oxide films 9 (*see* FIG. 3; col. 4, lines 9-11, 22-25). Although, the Akaishi patent discloses that a region of the substrate surface is selectively oxidized by the LOCOS method, the cited reference *does not* disclose or suggest that the LOCOS oxide films 9 are “patterned” to form a gate insulating film. FIGS. 4-8

of the Akaishi patent clearly show that the LOCOS oxide films 9 are not modified or patterned in any way after the oxide films 9 are formed.

At least for the foregoing reason, claim 5 should be allowed.

Claims 6-10 depend from claim 5 and should be allowed for at least the same reason.

Moreover, the dependent claims recite additional features that are not disclosed or suggested in the Akaishi reference. For example, claim 7 recites that the first gate insulating film is not formed at a position "*lower* than at least a surface position of the semiconductor layer" in the step of forming the first gate insulating film. However, as FIG. 3 of the Akaishi patent shows, the bottom portion of the LOCOS oxide film 9 is clearly formed at a position *lower* than the top surfaces of both N layer 22 and P type well region 21 which contact the pad oxide film 30. Therefore, in contrast to claim 7, the Akaishi patent discloses a gate insulating film that is formed at a position lower than a surface position of a semiconductor layer.

At least for this additional reason, claim 7 should be allowed.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

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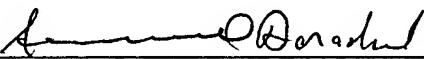
Conclusion

In view of the above remarks, all remaining claims are allowable and a notice of allowance should be issued.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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